



THE PORT AUTHORITY
OF NEW YORK AND NEW JERSEY

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Engineering Department
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The World Trade Center
Electrical/HVAC
Upgrade Program

TOWERS ONE AND TWO
LOW VOLTAGE SUBSTATIONS
CONSTRUCTION AND
INSTALLATION

ARCHITECTURAL
ABBREVIATIONS,
LEGEND, DRAWING
CONVENTIONS AND NOTES

No. Date Revision Approved
This drawing subject to conditions in contract.
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Designed by Drawn by Task Leader
Principal Architect
Date 5/1/95 Scale AS SHOWN
Contract Number Drawing Number
WTC-802.071 A-1

ABBREVIATIONS

A.C.	AIR CONDITIONER	FUT.	FUTURE	R.	RISER
A.D.R.	ACCESS DOOR	FAI	FRESH AIR INTAKE	R.A.	RETURN AIR
A.F.F.	ABOVE FINISHED FLOOR	G.R.	GUARD RAIL	R.D.	ROOF DRAIN
A.P.	ACCESS PANEL	GA.	GAUGE	RAD.	RADIUS
ABV.	ABOVE	GALV.	GALVANIZED	REF.	REFERENCE
AC.T.	ACOUSTIC TILE	CL.	GLASS	REFRIG.	REFRIGERATOR
ADJ.	ADJUSTABLE OR ADJACENT	GR.	GRILL	REINFORCING	REINFORCING
ALTER.	ALTERED, ALTERATION	CRTG.	GRATING	REQD.	REQUIRED
ALUM.	ALUMINUM	GYP.	GYPSPUM	REVL. DR.	REVOLVING DOORS
ANG.	ANGLE	GYP BD.	GYPSPUM BOARD	RM.	ROOM
ANOD.	ANODIZED			R.O.	ROUGH OPENING
APP.	APPROVED	H.	HIGH		
APPROX.	APPROXIMATE	H.C.	HUNG CEILING	S.	SOUTH
ARCH.	ARCHITECTURAL	H.M.	HOLLOW METAL	S.C.	SELF CLOSING
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	H.P.	HIGH POINT	S.F.	SQUARE FEET
		H.R.	HANDRAIL	S.P.	STARTING POINT
		H.S.	HIGH STRENGTH	S.S.	SUBSTATION
B.	BASE	HVAC	HEATING, VENTILATION & AIR CONDITIONING	SDL.	SADDLE
B.L.	BUILDING LINE			SECT.	SECTION
BD.	BOARD	HDR.	HEADER	SIM.	SIMILAR
BKT.	BRACKET	HEX.	HEXAGONAL	SLD'G.	SLIDING
BLDG.	BUILDING	HGT.	HEIGHT	SPEC.	SPECIFICATION
BM.	BEAM	HORIZ.	HORIZONTAL	SQ.	SQUARE
BOT.	BOTTOM	HTR.	HEATER	ST.	STAINLESS
				STIFF.	STIFFENER
C.	COURSE	I.D.	INSIDE DIAMETER	STL.	STEEL
C.D.	CEILING DIFFUSER	INCL.	INCLUDING	STOR.	STORAGE
C.H.	CEILING HEIGHT	INFO.	INFORMATION	STRUCT.	STRUCTURAL
C.J.T.	CONSTRUCTION JOINT	INSUL.	INSULATION	SUSP.	SUSPENDED
C.L.	CENTERLINE	INT.	INTERIOR	SW.	SWITCH
C.M.U.	CONCRETE MASONRY UNIT			SYS.	SYSTEM
C.R.	CEILING REGISTER	J.T.	JOINT	S.A.	SUPPLY AIR
C.S.	CONCRETE SLAB				
CAB.	CABINET	K.	KIPS	T.	TREAD
CEM.	CEMENT			T.&B.	TOP AND BOTTOM
CERT.	CERAMIC TILE			T.&G.	TONGUE AND GROOVE
CHAN.	CHANNEL			T.&S.	TAPE AND SPACKLE
CLG./CEIL.	CEILING	L.	ANGLE	T.O.	TOP OF
CLOS.	CLOSET	L.L.	LIVE LOAD	T.O.M.S.	TOP OF MASONRY
COL.	COLUMN	L.P.	LOW POINT	T.O.S.L.	TOP OF SLAB
CONC.	CONCRETE	L.W.	LIGHT WEIGHT	T.O.S.	TOP OF STEEL
COND.	CONDITIONS	LAM.	LAMINATED	T.P.H.	TISSUE PAPER HOLDER
CONN.	CONNECTION	LG.	LONG	T.T.D.	TOILET TISSUE DISPENSER
CONST.	CONSTRUCTION	L.T.	LIGHT	TAN.	TANGENT
CONT.	CONTINUOUS	LTG.	LIGHTING	TEL.	TELEPHONE
CONV.	CONVECTOR			TEMP.	TEMPORARY
CORR.	CORRUGATED	M.	MEN	TERM.	TERMINAL
CPT.	CARPET	M.D.	METAL DECK	THK.	THICK
CSK.	COUNTERSINK/SUNK	M.H.	MANHOLE	THRU.	THROUGH
CL.	CLEAR	M.O.	MASONRY OPENING	TRANSF.	TRANSFORMER
CONDU.	CONDUIT	M.S.	MARBLE SADDLE	TYP.	TYPICAL
		MAS.	MASONRY	TEMP. GL.	TEMPERED GLASS
D.	DIAMETER	MAT'L.	MATERIAL	ULDES.	UNDERWRITERS LABORATORY
DO.	DITTO	MECH.	MECHANICAL		
DBL.	DOUBLE	MFG.	MANUFACTURER	U.N.	UNLESS NOTED
DEMO.	DEMOLITION	MIN.	MINIMUM	UNIF.	UNIFORM
DEPT.	DEPARTMENT	MIRR.	MIRROR	UNFIN.	UNFINISHED
DET.	DETAIL	MISC.	MISCELLANEOUS	U.C.	UNDER CUT
DIA.	DIAMETER	MTL.	METAL	U.S.	UNITED STATES
DIFF.	DIFFUSER	M.E.R.	MECHANICAL EQUIPMENT ROOM		
DIM.	DIMENSION	MEBR.	MEMBRANE	V.	VINYL
DN.	DOWN			V.C.T.	VINYL COMPOSITE TILE
DPL.	DUPLEX	N.	NORTH	V.SHT.	VINYL SHEET
DR.	DOOR	N.F.	NEAR FACE	V.I.F.	VERIFY IN FIELD
DRN.	DRAIN	N.I.C.	NOT IN CONTRACT	VERT.	VERTICAL
DWG.	DRAWING	N.S.	NEAR SIDE	VEST.	VESTIBULE
		N.T.S.	NOT TO SCALE		
E.	EAST	NO. #.	NUMBER	W.	WEST
E.F.	EACH FACE			W/O	WITHOUT
E.W.C.	ELECTRIC WATER COOLER			W/	WITH
EA.	EACH	O.A.	OVER ALL	W.C.	WATER CLOSET
EL/ELEV.	ELEVATION	O.C.	ON CENTER	W.P.	WORKING POINT
ELEC.	ELECTRICAL	O.D.	OUTSIDE DIAMETER	W.R.	WATER RESISTANT
EMERG.	EMERGENCY	O.H.	OVER HEAD	W.W.F.	WELDED WIRE FABRIC
ENCL.	ENCLOSURE	OPG./OPN'G.	OPENING	WD.	WOOD
EQ.	EQUAL	OPP.	OPPOSITE	W.F.	WATER FOUNTAIN
EQ SP.	EQUAL SPACES			WPGF	WATERPROOFING
EQUIP.	EQUIPMENT	P.E.	PASSENGER ELEVATOR	WTC	WORLD TRADE CENTER
ETC.	ETCETERA	P.I.P.	POURED IN PLACE	WIND.	WINDOW
EXT.	EXTERIOR	P.S.F.	POUNDS PER SQUARE FOOT		
EXIST.	EXISTING	P.S.I.	POUNDS PER SQUARE INCH		
EXP.JT.	EXPANSION JOINT	P.T.D.D.	PAPER TOWEL DISPENSER & DISPOSAL		
EXPN.	EXPANSION	PART.PTN.	PARTITION		
EXTN.	EXTENSION	PENETR.	PENETRATION		
ELEC/CL.	ELECTRIC CLOSET	PL.	PLATE		
ELEV.	ELEVATOR	PLAS.	PLASTER		
		PLUMB.	PLUMBING		
F.A.	FRESH AIR	P.M.	PREMOLDED		
F.D.	FLOOR DRAIN	PNL.	PANEL		
F.F.	FAR FACE	POL.	POLISHED		
F.H.C.	FIRE HOSE CABINET	PREFAB.	PREFABRICATED		
F.H.R.	FIRE HOSE RACK	PT.	PART		
F.O.	FACE OF FINISHED OPENING	PTD.	PAINTED		
F.P.	FIRE PROOFING	PR.	PAIR		
F.S.	FAR SIDE	R.A.	RETURN AIR		
FDN.	FOUNDATION	PAVT.	PAVEMENT		
FIN.	FINISHED				
FIXT.	FIXTURE	Q.T.	QUARRY TILE		
FL.	FLUSH				
FLR.	FLOOR				
FLT.HD.	FLAT HEAD				
FR.	FRAME				
FT.	FEET-FOOT				
FTG.	FOOTING				
FURN.	FURNACE				

LEGEND

	FLOOR SLAB OPENING
	EXISTING COL. AND WALL
	COVER EXISTING FLOOR SLAB OPENING
	EXISTING CORE WALL
	CONC. SLAB EXTENSION
	EXIST. PARTITION TO REMAIN
	2 HOURS FIRE RATED PARTITION
	2 HOURS FIRE RATED PARTITION ON CONC. CURB
	2 HOURS FIRE RATED COREBOARD PARTITION
	UPGRADE EXIST. PARTITION
	EXIST. CONSTRUCTION TO BE REMOVED
	EXIST. ALUMINUM PANEL
	INSUL. ALUMINUM PANEL
	EXIST. METAL LOUVER PARTITION TO REMAIN
	MET. WALL LOUVER
	ALUMINUM RAILING
	MATCH LINE
	ACOUSTIC CEILING TILES
	LIGHT FIXTURE SEE REFLECTED CLG. PLAN
	EXIST. DOOR TO REMAIN
	EXIST. DOOR-SWING REVERSED
	EXIST. DOOR TO BE REMOVED AND SALVAGE
	EXIST. DOOR TO BE REMOVED AND RELOCATE
	H.M. SINGLE DOOR
	H.M. DOUBLE DOOR

DRAWING CONVENTIONS

PLAN INDICATOR		PLAN NO. DWG.NO.
CONSTRUCTION INDICATOR		PLAN NO. DWG.NO.
REMOVAL INDICATOR		PLAN NO. DWG.NO.
DETAIL INDICATOR		DETAIL NO. DWG.NO.
ELEVATION INDICATOR		ELEV. NO. DWG.NO.
SECTION INDICATOR		SECT. NO. DWG.NO.
DIRECTIONAL		ROUTING DIRECTION OF REMOVAL AND DELIVERY
DIRECTION		NORTH ARROW
SPACE SYMBOL		SPACE NO.
ELEVATION SYMBOL		FIN. FL. EL. 00
COL. LINE BUBBLE		COL. NO.

NOTES

- ALL WOOD SHALL BE FIRE RETARDANT AS REQUIRED BY NYC BUILDING CODE.
- PARTITION DIMENSIONS ARE TO CENTERLINE OF PARTITION UNLESS OTHERWISE NOTED.
- CENTERLINES OF PARTITIONS ABUTTING WINDOW COLUMNS SHALL BE CENTERED ON THE COLUMNS, UNLESS OTHERWISE NOTED.
- PARTITIONS NOT LOCATED BY A FIXED DIMENSION ON THE PLAN SHALL BE LOCATED AS SHOWN ON THE REFLECTED CEILING PLAN. PARTITIONS SHALL BE CENTERED ON THE TILE OR SPLINE AS SHOWN.
- LOCATE ALL DOORS 6 IN. MINIMUM DISTANCE FROM ADJACENT INTERSECTING WALLS UNLESS OTHERWISE NOTED.
- EXISTING FLOOR TILE SHALL BE CLEANED, WALL PARTITION AND FINISHES WHERE REQUIRED, SHALL BE RESTORED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE REIMBURSED FOR SUCH RESTORATION ON A NET COST. SEE SECTION OF DIVISION #1 "NET COST WORK".
- RUBBER BASE SHALL BE INSTALLED ON ALL PARTITIONS, BOTH SIDES UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PAINT ALL WALL SURFACES UNLESS OTHERWISE NOTED IN FINISH SCHEDULE.
- THE CONTRACTOR SHALL PAINT EXISTING WALLS THAT ARE CUT AND/OR PATCHED. THE ENTIRE WALL SHALL BE PAINTED UP TO THE NEAREST EXTERNAL OR INTERNAL CORNER OR DOOR FRAME. COLOR SHALL MATCH EXISTING, UNLESS OTHERWISE NOTED IN FINISH SCHEDULE.
- THE CONTRACTOR SHALL MODIFY EXISTING ACOUSTIC CEILING TILES AS REQUIRED TO ACCOMMODATE LAYOUT AS SHOWN ON REFLECTED CEILING PLAN P-1 DWG. A-29 AND SHALL REMOVE AND REPLACE EXISTING TILES AS REQUIRED FOR MECHANICAL, PLUMBING, ETC., INSTALLATIONS. AS DIRECTED BY THE ENGINEER.
- CONTRACTOR SHALL SUBMIT COLOR PAINT SAMPLES FOR APPROVAL BY ENGINEER.

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF ONE OF THE CONTRACT DOCUMENTS, CONSTITUTING A PART OF CONTRACT NO. WTC-802.071 IN THE FORM IN WHICH SAID DOCUMENTS EXISTED AT THE TIME THE SAID CONTRACT WAS EXECUTED BY THE PARTIES.
DATE 6/21/95 *Smith A. Adam*
DATE 8/15/95 *Peter K. Sweeney*
SPEC. WRITER
SIGNATURE OF DESIGN